

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(pursuant to NAC 445A.236)

Permittee Name: Pioche Public Utilities (PPU)
P.O. Box 35
Pioche, NV 89043

Permit Number: NEV50052-Renewal

Location: Eagle Valley Road & U.S. Hwy. 93 (Lincoln County)
Latitude: 37° 56' 30"N, Longitude: 114° 26' 41"W
(Latitude/Longitude at South Side of Pond B)
Township 1N, Range 67E, Section 14

General: PPU services a customer base of approximately 670 residents and several commercial businesses (e.g., restaurants, retail stores) in Pioche, Lincoln County, Nevada. The current treatment system consists of the headworks (bar screen and Parshall flume) and four ponds (a primary treatment (aeration) pond (pond A), two stabilization ponds (pond B and pond C) and an infiltration basin (pond D)). All ponds are unlined at the present time, however PPU intends to install liners in pond A and ponds B and C within the next five (5) years. Average flow from October 2003 to June 2006 was .041 million gallons per day (MGD). Influent from the Town of Pioche collection system flows by gravity into the headworks. Additionally, raw sewage from the county detention center is pumped to the headworks from a lift station located at the detention center. Influent flowrate is determined by weekly staff gauge measurement in the 3" Parshall flume. The pond A operating depth is 10 ft. and twin 5 Hp aerators are used to mix and aerate the wastewater and microbes (i.e., mixed liquor) to accelerate natural aerobic digestion processes. In normal operational sequence, primary effluent then flows via gravity to pond B and then pond C, which are operated in the facultative mode. Normal operating depth of ponds B and C is 4-6 ft. in each pond. Polished effluent from the secondary ponds then flows via gravity to the 1-acre infiltration basin. In pond D, secondary-treated effluent percolates to the underlying groundwater. Groundwater in the area is estimated to be approximately 230 feet below ground surface.

Receiving Water Characteristics: The receiving water body for polished pond effluent is the groundwater of the State via percolation from pond D. The applicant reports a groundwater flow direction of northeast, which is away from the population center in Pioche. Based on the depth to groundwater (230 feet) and sparsely populated area surrounding the treatment ponds, the Division is not requiring PPU to conduct groundwater monitoring at this time. The permit requires all four treatment and disposal ponds to be fenced and posted to restrict public access.

Flow: The permit limits the 30-day average/daily maximum influent flow to 0.06 MGD. The permit conditions require notification to the Division when the 30-day average flow first equals or exceeds 85% of this value (i.e. 0.051 MGD) to ensure that adequate treatment capacity is provided. Present flow averages 0.041 MGD (October 2003 to June 2006).

Table 1: Plant Discharge Limitations

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Flow, MGD (Influent ¹)	0.06		Weekly	Discrete (Staff Gauge in Parshall Flume)
CBOD, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
CBOD, mg/L (Effluent ²)	30	45	Quarterly	Discrete
TSS, mg/L (Influent)	Monitor & Report		Quarterly	Discrete
TSS, mg/L (Effluent)	90		Quarterly	Discrete
pH, Std. Units (Effluent)	Between 6.0 to 9.0		Quarterly	Discrete

¹: Influent is defined as raw wastewater flow into the headworks but prior to discharge into the primary pond (pond A).

²: Effluent is defined as secondary-treated discharge from the secondary ponds (ponds B and C) but prior to discharge into the rapid infiltration basin.

Schedule of Compliance: The Applicant shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications the Administrator may make in approving the schedule of compliance. The Applicant shall implement and/or execute the following scheduled compliance requirements:

- a. Upon the effective date of this permit, the Permittee shall achieve compliance with the effluent limitations.
- b. Within 45 days of the effective date of the permit (March XX, 2007), the Permittee shall submit an updated Operations and Maintenance (O&M) Manual to the Division for review and approval. If no changes have been made to the O&M Manual since the last submittal, so state.
- c. The Permittee shall submit plans and gain approval for those plans from the Division prior to commencing construction of or modification to the treatment system, e.g., installation of pond liners, replacement of the headworks and aerators, and any other additions or modifications to the treatment system.

Rationale for Permit Requirements: The Division's rationale for the proposed monitoring conditions is as follows:

- *Flow:* Flow is tracked to ensure that the design capacity of the treatment ponds is not exceeded and reporting to the Division is made at 85% of the design capacity (permit limit) of 0.06 MGD.
- *CBOD:* The Division requires the monitoring of Carbonaceous Biochemical Oxygen Demand (CBOD or Inhibited BOD), as an indication of treatment performance in the ponds. The Division's secondary-treatment CBOD standards for ponds are 30 mg/L and 45 mg/L for the 30-day average and daily maximum values, respectively. CBOD is to be monitored and reported on a quarterly basis to coincide with the permittee's submittal frequency for Discharge Monitoring Reports (DMR's).
- *TSS:* The Division's secondary-treatment standards, in pond effluent for Total Suspended Solids (TSS) is 90 mg/L. TSS is to be monitored and reported on a quarterly basis.
- *pH:* The Division requires the effluent to meet a pH limitation of between 6.0 and 9.0 standard units. Pond pH will be a function of algal growth due to an increase in the level of the hydroxide ion (OH⁻) from algal synthesis. Excessive algal growth in ponds is to be discouraged since the resulting natural die-off of the algae can cause a septic, malodorous effluent.

Procedures for Public Comment: The Notice of the Division's intent to issue (renew) a permit authorizing the facility to discharge secondary-treated effluent into the groundwater via percolation, subject to the conditions contained within the permit is being sent to the **Lincoln County Record** and **Las Vegas Review-Journal** newspapers for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. The deadline date at the Division for receipt of all comments pertaining to this public notice period is **February 12, 2007 at 5:00 P.M.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to issue (renew) the proposed groundwater discharge permit for a period of five (5) years.

Prepared by: James T. Hogan
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January 2007

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